Claims:

1. A method of operating a computer entity in a network of computer entities that communicate with each other on a peer-to-peer basis, the method comprising
5   operating a reputation management process for managing at least one other said computer entity of the network; the management process comprising:

(a) collecting a plurality of reputation data items, each reputation data item describing an aspect of operation of a said at least one other computer entity of said network;

10   (b) monitoring said plurality of reputation data items; and

(c) generating an alert message in response to changes in at least one said reputation data item.

2. The method as claimed in claim 1, further comprising, multi-casting said alert
15   message to a plurality of other said computer entities.

3. The method as claimed in claim 1, further comprising applying a voting protocol to determine a group action on usage of said at least one other said computer entity.

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4. The method as claimed in claim 1, comprising determining changes in performance of said at least one other computer entity from changes in said reputation data items.

25   **5.** The method as claimed in claim 1, comprising sensing abrupt changes of a said aspect of operation of a said at least one other computer entity whereby to determine the possible existence of a technical operating problem with that entity, and outputting an alert message indicating this possible technical operating problem.

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6. The method as claimed in claim 1, wherein said reputation data is collected from a plurality of peer computer entities, which are operable to access said at

least one other computer entity of which said changes in performance are sensed.

7. The method as claimed in claim 1, wherein the reputation data items have types selected from the set:

a satisfaction data describing whether a user of a computer entity of said network is satisfied with their experience of said at least one other computer entity, or is not satisfied;

a found/not found data describing whether a user of a computer entity of said network found a service at a particular said at least one other computer entity or did not find said services at said particular said at least one other computer entity;

an ease of use data describing whether a user found a specified computer entity to be easy to use or to be difficult to use;

a service provision data describing whether a computer entity is capable of providing a service or resource, to a user requesting said service or resource, or whether said computer entity is incapable of providing said service or resource.

8. The method as claimed in claim 1, wherein step (a) comprises storing reputation data in a database locally at said computer entity, said reputation data describing at least one reputation data type for each of one or a plurality of other computer entities of said network; and step (b) comprises analysing said reputation data to determine a performance parameter of at least one said computer entity.

9. The method as claimed in claim 1, wherein the reputation data items provide reputation data describing a plurality of user experiences of one or a plurality of other computer entities of said network, step (c) comprising generating a set of alert messages dependant upon a reputation data collected in step (a).

10. The method as claimed in claim 1, further comprising determining whether to interact with said at least one other computer entity on the basis of reputation

data derived from the reputation data items collected in respect of said at least one other computer entity.

11. A computer entity comprising:

- a computer platform capable of providing a set of resources including communication resources for communicating with other computer entities on a peer-to-peer basis; and

- a reputation service component capable of providing a reputation service for monitoring quality of service parameters of at least one said other computer entity; said reputation service component being arranged to:

- collect a plurality of reputation data items each describing an aspect of operation of a said at least one other computer entity; and

- generate an alert message in response to changes in at least one said reputation data item.

12. The computer entity as claimed in claim 11, wherein said reputation service component is further arranged to multi-cast said alert message to a plurality of peer computer entities.

13. The computer entity as claimed in claim 11, wherein said reputation service component is further arranged to apply a voting protocol to determine a group action on usage of said at least one other said computer entity.

14. The computer entity as claimed in claim 11, wherein said reputation service component is arranged to generate a said alert message in response to detection of changes in said reputation data items indicative of changes in performance of said at least one other computer entity.

15. The computer entity as claimed in claim 11, wherein said reputation service component is arranged to generate a said alert message in response to an abrupt change in reputation of said at least one other said computer entity that is

indicative of the possible existence of a technical operating problem with that entity.

16. The computer entity as claimed in claim 11, wherein the reputation service component further comprises at least one analysis component for analyzing a reputation data item.

17. The computer entity as claimed in claim 11, wherein the reputation service component is arranged to collect reputation data items from a plurality of computer entities in a peer to peer network; the reputation service component being further arranged:

- to analyze the reputation data items and, as a result of this analysis, to identify changes in reputation for individual ones of said other computer entities;
- to generate a reputation message upon identifying a significant change in reputation, said reputation message describing a reputation of said at least one other computer entity; and
- to send said reputation message to at least one other computer entity of said network.

18. A data storage medium storing program data for operating a computer entity in a network of computer entities, said program data comprising instructions for causing said computer entity to:

- operate a peer-to-peer protocol for communicating with other computer entities of said network; and
- perform a management process for management of at least one other said computer entity of said network, said management process comprising:
  - collecting a plurality of reputation data items, each reputation data item describing an aspect of operation of a said at least one other computer entity of said network;
  - monitoring said plurality of reputation data items; and

    - generating an alert message in response to changes in at least one said reputation data item.

19. The data storage medium as claimed in claim 17, wherein said instructions
5   are arranged to cause the computer entity to determine the possible existence of a technical operating problem with a said at least one other computer entity from abrupt changes in said reputation data items.

20. A method of operating a plurality of computer entities in a computer network,
10   said plurality of computer entities interacting on a peer to peer basis, the method comprising:

    each said computer entity operating a peer to peer protocol allowing the computer entity to interact with at least one other said computer entity of said network;

15   at least one said computer entity of said network performing a management process comprising collecting reputation data from at least one other said computer entity of said network, said reputation data describing at least one user's perception of a performance parameter of one or more said computer entities of said network.

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21. The method as claimed in claim 20, wherein said reputation data comprises a data type selected from the set:

    a satisfaction data describing whether a user of a computer entity of said network is satisfied with their experience of that computer entity, or is not
25   satisfied;

    a found/not found data describing whether a user of a computer entity of said network found a service at a computer entity of said network or did not find said service at said computer entity;

    an ease of use data describing whether a user found a specified computer
30   entity of said network to be easy to use or to be difficult to use;

a service provision data describing whether a computer entity is capable of providing a service or resource, to a user requesting said service or resource, or whether said computer entity is incapable of providing said service or resource.

5   **22.** The method as claimed in claim 20, further comprising identifying technical faults of a said computer entity of said network from an analysis of said reputation data.

23. The method as claimed in claim 20, comprising identifying a change in
10   performance of at least one said computer entity from an analysis of said reputation data.

24. The method as claimed in claim 20, comprising identifying a change of reputation in at least one said computer entity of said network by analysing said
15   reputation data.

25. The method as claimed in claim 20, further comprising using said reputation data to select a said computer entity to interact with.

20   **26.** The method as claimed in claim 20, wherein said management process comprises determining whether or not to interact with a said computer entity of said network, based upon said reputation data collected from said at least one other computer entity.

25   **27.** A method of operating a computer entity, said method comprising the processes of:

collecting reputation data from a plurality of computer entities in a peer to peer network; the reputation data collected from each entity of said plurality describing a user's perception of a performance parameter of one or more
30   other computer entities of said network;

analyzing said reputation data to identify changes in reputation data for individual ones of said other computer entities;

upon determining a significant change in reputation data, generating a reputation message, said reputation message describing a reputation of said at least one other computer entity; and

sending said reputation message to at least one other computer entity of said
5   network.

28. The method as claimed in claim 27, wherein said reputation data comprises a data type selected from the set:

a satisfaction data describing whether a user of a computer entity of said
10   network is satisfied with their experience of that computer entity, or is not satisfied;

a found/not found data describing whether a user of a computer entity of said network found a service at a computer entity of said network or did not find said service at said computer entity;

15   an ease of use data describing whether a user found a specified computer entity of said network to be easy to use or to be difficult to use;

a service provision data describing whether a computer entity is capable of providing a service or resource, to a user requesting said service or resource, or whether said computer entity is incapable of providing said service or resource.

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29. A computer entity adapted for communication on a peer-to-peer basis with other computer entities and comprising:

a data collection arrangement for collecting reputation data from a plurality of computer entities in a peer to peer network, the reputation data collected
25   from each entity of said plurality describing a user's perception of a performance parameter of one or more other computer entities of said network;

an analysis arrangement for analyzing said reputation data to identify changes in reputation data for individual ones of said other computer entities;
30   a message generation arrangement arranged to respond to the identification arrangement identifying a significant change in reputation data, by

generating a reputation message describing a reputation of said at least one other computer entity; and

an output arrangement for sending said reputation message to at least one other computer entity of said network.

30. The computer entity as claimed in claim 29, wherein the analysis arrangement is arranged to identify technical faults of a said computer entity of said network.

31. The computer entity as claimed in claim 29, wherein the analysis arrangement is arranged to identify a change in performance of at least one said computer entity.

32. The computer entity as claimed in claim 29, wherein the analysis arrangement is arranged to identify a change of reputation in at least one said computer entity of said network.

33. A method of operating a computer entity in a network of computer entities that communicate with each other on a peer-to-peer basis, said method comprising:

collecting reputation data about at least one other computer entity in said network;

monitoring said reputation data to detect changes in performance of said at least one other computer entity;

broadcasting a message describing said reputation data, or changes in reputation data, to other peer computer entities in said network; and

applying a voting protocol to determine a group action of a plurality of peer computer entities in respect of said at least one other computer entity about which said reputation data has been collected.

34. The method as claimed in claim 33, wherein said reputation data comprises a data type selected from the set:

a satisfaction data describing whether a user of a computer entity of said network is satisfied with their experience of that computer entity, or is not satisfied;

a found/not found data describing whether a user of a computer entity of said network found a service at a computer entity of said network or did not find said service at said computer entity;

an ease of use data describing whether a user found a specified computer entity of said network to be easy to use or to be difficult to use;

a service provision data describing whether a computer entity is capable of providing a service or resource, to a user requesting said service or resource, or whether said computer entity is incapable of providing said service or resource.

35. The method as claimed in claim 33, wherein said reputation data about said at least one other computer entity is provided by at least one further computer entity of said network.

36. The method as claimed in claim 33, wherein following said voting protocol indicating that action is required in respect of said at least one other computer entity, network management functionality is activated to carry out operations in respect of said at least one other computer entity.

37. A computer entity adapted for communication on a peer-to-peer basis with other computer entities and comprising:

a data collection arrangement for collecting reputation data about at least one other said computer entity;

a monitoring arrangement for monitoring said reputation data to detect changes in performance of said at least one other computer entity;

an output arrangement for sending a message describing said reputation data, or changes in reputation data, to peer computer entities; and

a voting arrangement for causing a voting protocol to be applied to determine a group action of a plurality of peer computer entities in respect of said at

least one other computer entity about which said reputation data has been collected.

38. The computer entity as claimed in claim 37, wherein said data collection arrangement is arranged to collect said reputation data about at least one other said computer entity from at least one further computer entity of said network.

39. The computer entity as claimed in claim 37, further comprising network management functionality arranged to be activated to carry out operations in respect of said at least one other computer entity upon said voting arrangement indicating that action is required in respect of said at least one other computer entity.